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Background

This document contains comments and the responses to those comments which are specific to the West Boise WWTF. Also included are Appendices A, B, and C which describe the water quality criteria applicable to the West Boise discharge, and the assumptions used in determining reasonable potential based on the additional data submitted by the City during the comment period. Appendix C shows the calculations used to develop the water quality-based effluent limitations for the West Boise WWTF permit.

Compliance Schedules

1. Comment: As the permit is presently worded, the City will require compliance schedules for the following:

- * **Metals limits**
- * **pH limits**
- * **WET limits**
- * **Ammonia limits**
- * **Measuring effluent flow**
- * **Fluoride**
- * **River flow monitoring**

Response: Idaho water quality standards at IDAPA 16.01.02.400.03 allow for compliance schedules where necessary to achieve compliance with water quality standards. The State certified a compliance schedule for copper of five years. The final permit includes a compliance schedule of four years, 11 months to meet effluent limits for copper. No compliance schedules were established for lead limits, since the facility currently discharges below the limits. Since the final permit no longer includes limits for fluoride, WET, or ammonia, no compliance schedules were established for those parameters. EPA reviewed additional pH data submitted by the City for the West Boise facility. Of the 727 data values collected over the period of August 1996 through July 1998, only one was below 6.5. Based on that information, EPA concluded that the City is essentially meeting the new pH limits of 6.5 - 9.0. The final permit allows the City 90 days to set up and implement an effluent flow measurement program. The permit also allows a compliance schedule of six months for the City to complete installing a UV disinfection system to replace the current chlorination system.

Quantification Levels and Compliance

2. Comment: Some effluent limits are established below quantification levels and others are above quantification levels but may be based on averages that include measurements below quantification levels. A footnote for all of the metals limitations needs to be added that says:

Any sample analyzed in accordance with the most sensitive EPA-approved method for a particular pollutant and found to be above the permit limitations for that pollutant, but below the quantification level specified in Section I.B.7, shall be deemed to be in compliance with the permit limit. For the purposes of evaluating compliance with limitations expressed as “average monthly,” any test result below the quantification levels specified in Section I.B.7 shall be considered “zero” when computing the average effluent concentration.

Response: As explained in the general responses, Region 10 follows its guidance in regulating water quality-based effluent limits (WQBELs) below analytical detection levels. Actual analytical results must be reported on discharge monitoring reports (DMRs) when the results are greater than the method detection limit (MDL). If the results are below the MDL, the permittee is to report the actual numeric value of the MDL. When evaluating compliance with values less than the MDL, “zero” may be used in calculating averages. Otherwise, all data above the MDL is used in calculations. The pre-printed DMR will have the minimum level (ML)¹ entered into EPA’s permits compliance system (PCS) for determining compliance with the limit. Published MLs of EPA-approved methods will be used. Where published MLs are not available, then interim MLs (IMLs) will be used.² See General Comments for further discussion. The following table summarizes the MLs and IMLs authorized for this permit.

Parameter	ML, Fg/L	IML, Fg/L
Lead	---	2.2

¹ “Minimum level (ML)” is the concentration in a sample that is equivalent to the concentration of the lowest calibration standard analyzed by a specific analytical procedure, assuming that all the method-specified sample weights, volumes, and processing steps have been followed.

² IML = 3.18 x MDL.

Flow

3. Comment: **Effluent.** The prior permit required flow measurements using either the influent or the effluent. West Boise has reported flow based on influent and the plant expansion design calls for influent flow measurement. The proposed permit does not provide a choice and instead requires effluent flow to be measured. To have to switch will require changes to the plant effluent design, changing the hydraulic profile at significant cost.
- Response: The permit has been revised to require that influent flow, instead of effluent flow, be measured.
4. Comment: **South Channel flow.** The permit requires weekly flow monitoring of the South Channel. The City recommends that the permit allow alternative flow monitoring approaches as described in the General Comments.
- Response: The City did not propose any alternative approaches other than suggesting that flow be estimated. (See General Comments.) EPA has added a requirement that the City determine streamflow using standard methods recognized by the US Geological Survey which include gaging station data, discharge measurement, and estimation using all available data. The permit requires the City to make discharge measurements to verify estimates.

Biochemical Oxygen Demand

5. Comment: Remove the seasonal approach since that does not apply to West Boise.
- Response: The permit has been revised accordingly.

Total Suspended Solids (TSS)

6. Comment: The permit incorrectly includes seasonal limits for TSS and they should be removed. Load limits likely will need to be adjusted in the future to account for the total maximum daily load (TMDL) process in the watershed.
- Response: The permit has been revised as recommended. Load limits were adjusted based on the new design flow for the West Boise WWTF. As the City pointed out, the permit may have to be reopened and modified to account for the TMDL wasteload allocations developed in the future.

E. coli Bacteria

7. Comment: The watershed group will be conducting *E. coli* monitoring. The City prefers to monitor through this group or through development of a memorandum of understanding (MOU) with stakeholders in the watershed. Remove the monitoring requirement.

Response: EPA agrees that it would be helpful to have monitoring coordinated on a watershed basis and strongly encourages this approach. It is, however, the City's responsibility to report the required information, not the watershed group's. If the City wishes to submit the watershed group's data to satisfy this permit requirement, it may, although the City will be responsible for the quality and accuracy of the data. This monitoring requirement will remain in the permit.

Total Ammonia Limits

8. Comment: These need to be deleted. The West Boise Facility will install selector technology which is expected to substantially reduce the effluent ammonia. Performance at the West Boise plant for the last two years also supports a finding of no reasonable potential to exceed (RPTE). If EPA concurs that ammonia limits are not necessary, EPA should reduce the monitoring frequency. The mass load limits should also reflect the new design capacity of 24 mgd.

Response: EPA has re-evaluated the need for ammonia limits based on the daily information submitted by the City. As a result, limits are no longer necessary. EPA has removed the limits and reduced the monitoring frequency from weekly to monthly.

Total Residual Chlorine (TRC)

9. Comment: The limits for TRC should be removed because there is no RPTE, and the City is installing a UV disinfection system similar to the one installed at Lander Street. The monitoring requirement for TRC should have a footnote that states that the monitoring requirement will be discontinued when the City has completed its switch to UV disinfection.

Response: As discussed in the General Comments, EPA has added a compliance schedule with a technology-based interim limit of 0.5 mg/L.

Dissolved Oxygen (DO) Limits and Monitoring Requirements

10. Comment: The fact sheet fails to recognize that site specific surface water criteria for salmonid spawning and dissolved oxygen of 6 mg/L or 75 percent saturation, whichever is greater, has been adopted for the reach of the Boise River from Veterans Park to the mouth of the river (IDAPA 16.02.02.278) and has inadvertently applied the more stringent criteria. In addition, the permit proposes the application of instream water quality standards at the end of the pipe without accounting for mixing.

The sample type should be changed to grab from 24-hour composite. Add a footnote that acknowledges that the City has the flexibility to use continuous monitoring equipment.

Response: EPA has made the recommended change in the DO criterion. The limits from the current permit will be retained in the final permit. The sample type has also been changed to grab.

Temperature Requirements

11. Comment: Because it is impossible to know precisely when the hottest part of the day will occur, footnote No. 7 should be changed to: "Weekly temperature samples shall be collected in the afternoon."

Response: EPA agrees that it is difficult to know precisely when the hottest part of the day occurs given the available information. The hottest part of the day varies with the season, generally occurring prior to 6 p.m. and later than 12:30 p.m. The permit has been revised to require that samples be taken at the time of day that the water temperature is the highest. A statement has been added allowing the City to use continuous monitoring for temperature.

12. Comment: Add a statement that allows the City to take grab samples or use continuous monitoring equipment for temperature.

Response: A statement has been added to allow the City the option of taking grab samples or using continuous monitoring equipment. However, the City must make that decision within the first 6 months of the effective permit and then use that same method throughout the life of the permit.

13. Comment: The ambient temperature monitoring requirements should be reduced to one or two years, rather than for the life of the permit. The monitoring should either stop or only continue on a seasonal basis for the remainder of the permit.

Response: The temperature monitoring program has been revised to continue for 2 years.

Fluoride

14. Comment: The limit for fluoride should be deleted. The limit was based on an incorrect interpretation of the applicable state standard. The fact sheet identifies an applicable criterion of 1.0 mg/L based on protection of irrigation of agricultural lands based on IDAPA 16.01.02.250.03.b. That section identifies the applicable criteria for protection of agricultural uses as “the water quality criteria set forth in Section 200.” Section 200 contains eight narrative “free from” water quality criteria and includes language that allows use of the criteria in the 1973 Blue Book should “specificity be desirable or necessary to protect a specific use.” No finding was made to suggest that specificity is desirable or necessary to protect this use.

The Blue Book fluoride criterion of 1.0 mg/L is based on continuous irrigation to acidic soils, neither of which condition exists in the Boise Valley (seasonal irrigation and alkaline desert soils).

Response: After clarification from IDEQ, EPA has recalculated reasonable potential using the drinking water criterion of 4.0 mg/L for fluoride. Based on this evaluation, no RPTE exists and the fluoride limits have been removed from the permit.

Hardness

15. Comment: Add hardness as an effluent parameter to be monitored at the same time as metals measurements. This will allow the effluent metals observations to be compared to the hardness-dependent metals standards.

Response: Mixed hardness has been added to the permit as well as effluent monitoring of hardness. EPA does not evaluate compliance of each sample based on the hardness of that sample. Instead, EPA uses critical low-flow conditions to ensure that water quality standards are achieved. In

situations where appropriate, such as with West Boise and Lander Street permits, seasonal limits may be included.

Ambient Monitoring

16. Comment: Add a statement that ambient monitoring refers to monitoring of the receiving water.

Response: This clarification has been added to the permit.

Receiving Water Reports

17. Comment: Due to the volume of data involved, the City requests that reports of ambient monitoring be submitted in quarterly Receiving Water Reports with the due dates established in the permit as the 15th of the month following the end of the quarter.

Response: The permit has been revised to incorporate this request.

TSS, pH and Hardness Methods

18. Comment: Add “or any other approved method listed in Table 1B of 40 CFR 136 ” to Part I.B.10 of the permit.

Response: EPA has changed the permit accordingly.

Nutrient Monitoring Plan

19. Comment: These requirements do not need to be in the permit. Nutrient assessment monitoring is already being conducted in the watershed by the Lower Boise Watershed group (LBRWQP) and would be a duplication of effort.

Response: The nutrient monitoring plan for algae was incorporated into the draft permit at the request of IDEQ. Upon further review, IDEQ has decided to drop this requirement from the permits. Nutrient effluent and ambient monitoring will be retained.

Pretreatment Program Sampling Requirements

20. Comment: The present permit includes a provision that allows the City flexibility to add or drop pollutants to or from the pretreatment sampling list without formal notice. The proposed permit needs to continue this provision.
- Response: In reviewing this comment, EPA found the City appeared to misunderstand the intent of the flexibility provision by assuming the flexibility to delete monitoring at will was at the City's discretion. EPA meant to exercise the flexibility at its discretion, not at the City's discretion. EPA requires that the City maintain pretreatment sampling for a specific list of pollutants so that historic data can be gathered. This will enable future evaluations of the need for local limits. The permit has been revised to clarify that the sampling protocol may be modified or sampling deleting, based upon EPA's approval.
21. Comment: The permit needs to define the "wet" and "dry" seasons.
- Response: The permit has been revised to specify that the sampling periods for metals and cyanide are April through September and October through March.
22. Comment: The City requests that the QAPP be submitted within 180 days rather than 90 days as currently proposed. The City will be implementing a clean metals sampling program and is bringing a new clean metals analysis laboratory on-line and may require more than the 90 days allotted.
- Response: Correspondence to EPA from the City has said that the City is already in the process of setting up the clean metals program. The Cities of Nampa and Caldwell have been given the same amount of time in which to develop the QAPP. No change has been made to this requirement.
23. Comment: The design criteria requirements need to be revised. The new average design flow should be 24 mgd instead of 16 mgd. The design criteria for influent BOD and TSS loadings need to be increased to 41,600 lbs/day BOD and 48,800 lbs/day for TSS. The City has already developed a Facility Plan so it does not need this review requirement in either of its NPDES permits for this permit cycle.
- Response: EPA agrees that in the case of Lander Street, the City's plan for achieving compliance with its permit conditions when flow capacity is 85 percent or more is well-established. The design criteria requirement has been removed from the Lander Street permit. EPA believes the requirement is still needed for the West Boise WWTF. While EPA has read the facility

plan submitted by the City in 1995, it contained options that might be used to increase capacity at West Boise. If growth increases more rapidly than projected as a result of this plan, or projected upgrades do not take place, EPA will want to be apprized of how the City intends to maintain compliance with permit conditions. The design criteria values for the West Boise WWTF have been updated.

24. Comment: Footnote No. 2 (in the Biosolids Treatment Requirements section) contains an error in citation. The correct reference should be 40 CFR § 503.33(b)(3), Class B alternative **3** (not alternative 2).

The requirement to provide EPA 90-day written notice prior to switching pathogen reduction methods is unreasonable. The City has performed two forms of pathogen reduction methods concurrently. This has allowed the City the flexibility to effectively manage digester cleaning and other operational activities while demonstrating compliance with Class B sludge requirements.

Response: Footnote No. 2, based on the permit application, should read: 40 CFR § 503.32(b)(3), class B-Alternative 1, and has been changed in the final permit.

Since the City has demonstrated capability to use both methods of pathogen reduction (i.e., anaerobic digestion and fecal coliform counts), the permit has been revised to allow use of either method without a notification period.

25. Comment: Part I.D.7 (Biosolids Generation Limitation) allows only biosolids generated by the West Boise facility or mixtures which contain biosolids generated by this facility to be applied to the land or otherwise used or disposed of under this permit. This requirement restricts the City's ability to apply unmixed Lander Street sludge at a dedicated disposal site, even if all regulatory requirements for a Class B material are met and all other conditions of the permits are satisfied.

This statement would also prevent regionalization of Class B municipal sewage sludge management whereby one land application site would serve WWTFs in addition to the Lander Street and West Boise plants. By placing this restriction as a condition of the NPDES permit, EPA is mandating a lengthy process to allow regionalization only through permit modification. This restriction is beyond the scope of this NPDES permit

and may prevent an agreement which would better protect the public and the environment.

Response: The City has correctly interpreted the clauses. Lander Street sludge that is unmixed is the responsibility of the Lander Street WWTF and can only be covered under the Lander Street permit. EPA recognizes that West Boise may manage the land application but only as an agent of Lander Street. Based on the sludge permit applications, EPA is aware that Lander Street sludge may be directly land applied.

The City did not include in its permit application as an option it wanted to pursue of regionalization of Class B municipal sewage. This restriction is not beyond the scope of this NPDES permit. If the City wants to pursue this option, it can apply for a permit modification.

26. Comment: Part I.D.8.c. (Requirements for Sludge Received), which specifies the requirements for sludge received from the Lander Street WWTF should be deleted from the permit.

Response: The permit conditions were developed based upon the information supplied by the City in its sludge permit application. From transfer applications it should be possible to determine the likely treatment and disposal capabilities of the facility receiving sludge, such as by disposal trench or contract composting operation. Regarding toxics contents of the sludge, EPA also looks for information on mixing ratios or other controls such that there is a reasonable probability that a final product will be of adequate quality. In this case, there is no evidence that the receiving facility (West Boise WWTF) has any capability to provide pathogen or stabilization control beyond amounts already being generated by the West Boise WWTF.

Until the City can demonstrate that West Boise can provide adequate pathogen and vector control for the amounts generated by both West Boise and the Lander Street WWTF, both sludges must meet the requirements before being mixed.

If the feedstock control plan that West Boise is required to develop demonstrates adequate treatment for the amounts generated by both West Boise and the Lander Street WWTF, EPA may change the limits for metals in the Lander Street sludge. The Lander Street WWTF may still

need periodic testing to comply with the West Boise feedstock control plan.

27. Comment: The section on sludge reception prohibitions should be deleted. If the receiving facility is not in compliance with the conditions of this “or any permit” held by the receiving facility, biosolids transfer is to be shut down. This requirement is overly broad; theoretically, if the City were out of compliance with a building permit, sludge transfer would have to be shut down.

Response: EPA has revised the permit to clarify that sludge transfer can only occur when the receiving facility is in compliance with sludge treatment practices. Transfer may resume when the receiving facility demonstrates that it is in compliance with its sludge treatment requirements.